

Commercial Service Caribbean Region Jamaica

Prefabricated Buildings

Summary

Prefabricated building construction allows a relatively rapid erection of large numbers of housing solutions at a moderate unit cost. Informed business people and officials in Jamaica's construction sector anticipate that this approach to construction and derivatives of the approach, will be a way to meet the great demand for low and medium-priced houses in particular. In recent years, much of the technologies used have increasingly been sourced from countries such as France and Canada. Some input also comes from the United States – particularly for certain high quality finished interior components used in houses.



Market Overview and Trends

Regardless of the prevailing economic climate, Jamaica's building and construction sector has generally been one of the most active sectors of the economy. National macroeconomic policies, and the framework in which businesses must operate of course, affect the extent of the activity. Significant elements in the macroeconomic environment, which affect the sector, are interest rates, crime, and overall economic growth.

Following a decline in 1999, there have been continuous years of growth in the building and construction sector. This has been fuelled by increases in activity in the non-residential sector as well as increasing levels of work in the residential sub category. According to the Planning Institute of Jamaica, for the year 2003, the increased activity in the sector was evidenced by increases in the use of cement, increases in the number and value of mortgages, increases in the production of selected aggregates used for building construction and increases in the number of Electrical Inspections for buildings. For 2003, there were over 27,000 such inspections compared with 24,630 in 2002.

Prefabrication offers the possibility of lower costs through the use of mass production methods. In building construction, prefabrication may be considered for whole buildings or for definite components of a building. For example, prefabricated components could include walls, closet shelving/interiors, kitchen cupboards, and so on in addition of course, to a complete structure. However, an important consideration is the possible cost of



shipping and handling that may result. Particular care must be taken with the handling of large concrete slabs: extra reinforcement, care and caution may be required to make sure that the concrete joints have the required strength as well as to prevent or minimize cracks.

The adoption of prefabrication building techniques has several merits particularly in the context of availability of materials, labor and technical skills. These techniques offer a sure way to cut building costs. Typically, as many parts as possible may be made ready for installation prior to arrival at the building site. This of course, could include joists, studs and so on, but the concept could also be extended to include large building components such as large sections of walls, floors and roofs. For full prefabrication, the entire house may be prefabricated.









The use of the prefabricated mode of construction in Jamaica has primarily been for residential construction. Since the 1950's several housing developments have been undertaken for middle class consumers. At the first mention of the expression "Prefabricated Buildings", the typical Jamaican thinks of the tens of thousands of residential concrete homes that have been constructed in the Portmore area over the past ten years. The expression, however, examined more broadly, implies the use of components that are largely manufactured at a remote location so as to allow quick or more efficient installation at the site.



Import market and Competition

An examination of the import market for prefabricated buildings requires some thought of how widely one would have the term defined. To most individuals in Jamaica, the term prefab refers to rapidly constructed residential concrete structures. In its broadest sense, however, the term refers not only to the "four square walls" of the outside of a building, but also to the smallest components such as shelving, stairs, closets and so on within.

For construction and development projects in Jamaica that depend on prefabricated methodologies, a variety of types of equipment and products have to be imported. Several decades ago, structures built out of wood were not uncommon. In recent years, prefab building construction using wood as the base material has been used in a few remote areas that have been affected by the passage of hurricanes. This is noticeable in remote parts of southern Jamaica and has been funded by charitable organizations (Food for the Poor). This has required the importation of simple components from the United States. On a very small scale, there has also been some local development of prefab construction technique using wood.

For a variety of reasons, however, concrete structures with steel reinforcements are preferred. The majority of prefab construction for buildings in Jamaica has involved the use of moulds of various types, lifting paraphernalia as well as mobile equipment. Typically, a steel mould for a precast façade, for example, may need to be lifted from horizontal to a vertical position. A portal frame may also be required depending on the required movement and positioning of the façade.

One local company, West Indies Home Contractors (WIHCON) has played a major role in prefabricated construction in Jamaica for more than 50 years. WIHCON has also developed and patented its own system, which has been used overseas (Trinidad).



Over the past 5 or so years, a few local developers have shown a preference for modern building technologies from France. One major Jamaican company uses a French system that utilizes a "poured-in-place" or in situ approach, using steel forms on which the concrete is poured to create the foundation, walls and roof, which are then made waterproof. To some technical purists, this should not really be termed prefabrication. Nevertheless, it is a major improvement to other systems that use precast components. The windows, door openings, electrical and plumbing pipes are pre-positioned. Systems such as these are among the most competitive and efficient in the world and from foundation it can be handed over or completed in under a month. Under special circumstances up to 2 houses can be delivered per day. The approach also creates efficiency in materials, as there is less wastage, which is typical for block and steel construction. There is also less chance for theft and pilferage, which is usually a major worry on construction sites in Jamaica.









In 2003, the total import market for building and related products was about US\$450 million. According to senior professionals in the sector, prefab concrete housing construction in the country is carried out by about 6 major Jamaican companies. In total, it is estimated that they spend just about US\$20 million per year to have access to the basic rudimentary equipment needed. This is a relatively small fraction (about 5%) of the total import market for building and construction related products and as has been mentioned, the favored source country for the technology is France. Some Canadian technology is also used. The market for imported prefabricated components such as shelving, kitchen cupboards, panels and other fittings represents about 10% of the total import market. Over 60% of these fittings and components are currently sourced from the United States.



End Users

Demand for prefabricated construction comes from the thousands of Jamaicans that need homes annually. Major local companies that have been involved with this sort of construction are WIHCON (West Indies Home Contractors), Stresscon, Ashtrom Building Systems, Gore Developments, Aerocon Construction, New Era Homes, Magil Construction and Marley & Plant Limited. Several leading players in Jamaica's construction sector believe that the prefabricated method of construction and derivatives of it are definitely the way to go towards meeting mass demand for domestic housing solutions.

In order to help meet the growing demand, the Government of Jamaica launched a private sector facilitation housing program. This program has the objective of having private landowners and developers providing land and units. The Government will offer special facilities to speed up the process of approvals and so on and will take steps to ensure that costs are kept relatively low.

At its announcement late in 2003, the Government-private sector partnership was expected to result in 6,000 new housing units per year. The target price range is J\$1.2 million to J\$2.7 million (US\$19,350-US\$43,500), which would go towards the housing needs of lower and middle-income families. Many recent construction projects are located in the parishes of St. Catherine and Clarendon and these locations have become more attractive because the new highway ("Highway 2000") has allowed the "opening up" of wide expanses of land in areas that may previously have been regarded as being isolated. With the relative shortage of expanses of land for construction in Kingston, people who work in the city may now choose to live in St. Catherine and Clarendon because of the convenience of the new highway.



The level of financial resources disbursed for residential construction demonstrates the continued health in Jamaica's housing construction sector. The number and value of mortgages has shown increases in 2003 over the previous year and there are indications that there was further growth in 2004. According to the Planning Institute of Jamaica, there were 10,655 mortgages issued by major financial institutions in Jamaica (compared to 9,096 in 2002).

In 2003, the National Housing Trust (NHT) accounted for 63.3 per cent of the total number of mortgages disbursed. Established in 1976, the NHT has a major role in addressing housing shortages, which result from a growing population and the inadequate annual output of houses by the public and private sectors. The Trust emerged out of the need for a financial institution that could mobilize additional funds for housing and ensures that those funds are available to more Jamaican families at rates below the traditional markets rates.

Further to the announcements in 2003, the Government of Jamaica in 2005 announced plans for the development of more than 10,000 housing units – a significant amount of which will be completed by the end of 2005.











Included in the mix is a major initiative to provide 2,100 new housing units and serviced lots in the parishes of Trelawny, St. Ann, St. James, St. Mary, Hanover and Westmoreland. Many of these new developments will be close to existing and anticipated new investments in the tourist areas of Montego Bay, Ocho Rios and Tre-

Market Access / Entry

Jamaica is largely deemed to have fairly robust building standards. However, the Government is seeking to further enhance these to bring them in line with emerging global standards and to embrace issues that previously may not have been paid enough attention. Issues such as access to buildings for the disabled as well

as the special problems posed by high-rise buildings, including making them accessible during medical and other emergencies are under review.

The new Building Standards are being developed through the Government's agency, the Jamaica Bureau of Standards. The Bureau has indicated that the new standards (or "Building Code") will be available by the end of 2005 and will focus on construction in general which would include prefabricated construction. The enhanced code will have as its base the International Building Code (IBC), which is being adapted to Jamaica's requirements by the Bureau of Standards and the Jamaica Institution of Engineers. Areas to be covered include mechanical equipment code, plumbing code, energy conservation code, interface code and sewage code. There will also be a new compliance system that is expected to be enforced by the parish councils.

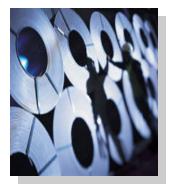
Because Jamaica is in an earthquake zone, consideration is being given to including important elements that would be expected of building codes in California. Similarly, because Jamaica is also subject to hurricanes, one could expect the same considerations that influence construction in areas such as Florida.

For building projects, approvals must be typically sought from the National Water Commission, Ministry of Health (Environment Health Unit), National Environment and Planning Agency (NEPA) and the National Works Agency. There must also be approval from the Local Planning Authority. For the Kingston region the planning authority is the Kingston and St. Andrew Corporation (KSAC).

Projects involving prefabrication technologies could require the importation of a range of components of building construction. It is also possible that there will be the importation of heavy equipment such as lifting gear, etc for local use and subsequent re-export. Duty rates for the various components used in buildings range from 0 to 15%. There is also a General Consumption Tax (GCT) of 15%, which is payable upon entry into the country. As of May 1, 2005, GCT was increased to 16.5%. According to Jamaica's Customs Department, it is possible to import various types of heavy equipment for subsequent re-export by completing a C25 form. The amount payable will depend on the invoiced value of the product and the applicable duty. The amount of the refund will depend on the length of time that the items are in the country.

Opportunities for Profile Building / Upcoming Events

The Incorporated Masterbuilders Association of Jamaica (IMAJ) is an association of Building, Civil Engineering and Specialist contractors. Among the IMAJ's objectives is to seek to maintain standards of excellence in the building and construction industry. They organize regular events, which attract the participation of a good cross section of the building and construction sector. For information on upcoming events, U.S. firms may contact:











Incorporated Masterbuilders Association of Jamaica

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Contact: Donald Mullings (President); Raymond Cooper (Vice President); Rosemarie Plant (Admin Manager)

The Hardware Merchants' Association (HMA) represents dealers and retailers of hardware and building materials from all over Jamaica. Every two years, the HMA organizes an Expo of which a primary focus is the Building and Construction industry. The 2005 show took place April 29 to May 1, 2005 and the next event is scheduled for 2007.

Contact information:

Hardware Merchants Association

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Contact: Michael Brooks (President); Jennifer Campbell (Admin Manager)

FOR FURTHER INFORMATION AND ASSISTANCE, PLEASE CONTACT:-

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